

pupate. I kept it in a matchbox; it pupated on the 18th, and on the 5th of May a fine specimen of *Pieris rapae* emerged.

I got back to Ain Draham on April 25th, but the weather there was still wet, or cloudy, for the most part. I went to a place I had noted as likely for *Calophrys aris*, and sure enough it was there. I took three on the 26th, four on the 29th, four on May 1st, the intervening days being cloudy or raining. They were all taken feeding on a sort of wild lavender, and all at the same spot: four of them are females.

On May 2nd I went to Tabarca, on the coast below Ain Draham; it is not nearly so good a place as La Calle. And on the 7th I left Africa for Palermo on my way north. I took a day out in the Roman Campagna on May 16th where I caught *Chrysophanus thersamon*, *Melitaea didyma*, *Melitaea phoebe* and some others, but was chiefly charmed by the wild roses and nightingales, and the scent of the white clover in the hay.

On May 19th I arrived at Locarno and on the 20th went to Reazzino to look for *Melitaea wheeleri*, which I found to be just hatching out. On this day and the 25th, the intermediate days being wet or cloudy, I took 21 males and one female. What seemed to me to be the noticeable difference between it and *Melitaea dictynna* is that in the darker specimens of *M. dictynna* it is usually the submarginal row of spots on the upper side of the hindwings which remains longest visible, the marginal and central rows, which are sometimes buff, fading into the dark ground colour, while the submarginal row, which is more orange, is more persistent. In *M. wheeleri*, however, the central row is the one that lasts longest. I have since been comparing the specimens of *M. dictynna* at the South Kensington museum. The Pyrenean specimens from Caunterets are like the Rhone valley *M. dictynna*—those from Gavarnie more like *M. wheeleri*—while the Vernet race has the characteristics of *M. wheeleri* still more marked than in *M. wheeleri* itself. All these, however, seem to be July. Looking further east the *M. dictynna* from Dervend and Maglaj, both in Bosnia, appear to be *M. wheeleri*, and were caught in June whereas those from Yaitze (Jaice), both at the museum and in my own collection, are like the Rhone valley *M. dictynna* and were caught in July. *M. wheeleri* does not seem to have been found further north, if one rejects the ambiguous label "Austria." One specimen from Rilo Dag and a small group from the Rosengarten near Bolzano in what was the Austrian Tirol may, however, belong to this race.

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### The generic names used in the *Neuere Beiträge*.

By B. C. S. WARREN, F.E.S.

Mr. Higgins mistakes my meaning if he thinks I was in any way questioning the validity of the generic names in the *Neuere Beiträge*. In the article he referred to I was merely correcting a slip I had made previously (*Ent. Rec.* p. 59, 1930) when I stated *eriphyle*, Frr. would fall as a primary homonym. This mistake was the result of a faulty copy of the original description I was then working from. As to

Freyer's work, he included all the butterflies in *Papilio*, as Mr. Higgins notes, and then divides the latter into genera according to a then recognised system. As there is not the least indication to show that he intended in any way to change the order of the system, I do not see how we can question the fact that he adopted these names and inserted them with the intention of dividing the *Papilio* into genera. Had this not been the case, it is, to me, impossible to account for his including them at all.

I understand that this view is accepted by many better qualified to judge than myself; and these genera are included as such by Sherborn in his great *Index*.

[I do not think that Freyer entered into the question of nomenclature at all. He merely took the thing as it stood in his time. Adopting Ochs. and Treit. nomenclature for his own work, and bowing to the conservation of the time he used the old generic names as class names for "the man in the street" so to say. In the preface to vol. I. of his *Beiträge* he speaks of Ochs. and Treits.' work as "above all other works up to our present time it is the most perfect," after stating that he has arranged his insects under their genera. With regard to *eriphyle* he placed his newly described species with its congeners, as he judged, in Genus VIII. *Hipparchia* of Och. and Treit. with *melampus*, *cassiope*, *pyrrhu* and *pharte*. (This was "Fam. E of *Hipparchia*.)"—HY.J.T.]

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## The Rose-coloured Pastor and Locusts.

By P. S. NAZAROFF.

In a recent important work on destructive locusts (*Locusts and Grasshoppers, A Handbook for their Study and Control*, Moscow, 1927, in Russian), B. P. Uvarov refers to the services rendered by certain birds in the struggle with this pest, and in particular to the Rose-coloured Pastor (*Pastor roseus*), which is well known for its fondness for these insects. The author considers that we have little real basis for and estimate of the amount of help which these birds afford mankind in this respect and recommends a census of the contents of the stomachs.

This, it is true, would enable us to form an idea of the quantities killed and eaten by these birds under given conditions, but the figures would be misleading, for such a census would take no account of the much greater quantity undoubtedly killed but not actually eaten.

I have often observed the destruction of locusts by these handsome starlings in the Kirghiz Steppes and in Turkestan. I use the word "destroy" with intent, because it is not only a case of the birds feeding on the locusts but of a strange instinct on their part to continue to kill them off when their appetite is sated. This fact is not generally known either to ornithologists or to entomologists although it is perfectly familiar to the natives of Turkestan and to people engaged there in the struggle with locusts, the worst offender among which is the so-called Moroccan Locust (*Dociostaurus maroccanus*, Thunb.).

In years when this insect swarms the rose-coloured pastor appears in immense flocks, no one knows whence. As a general rule this bird